

## **REMARKS**

Reconsideration of a present application is requested. Claim 8 has been canceled without prejudice or disclaimer, and claims 1 and 19 have been amended. The features added to claim 1 were previously set forth in now canceled claim 8. Claims 1-7 and 9-19 are pending, with claims 1, 11, 17 and 18 being independent.

## **ENTRY OF AMENDMENT AFTER FINAL REQUESTED**

Entry of this Amendment After Final is requested in that none of the amendments made herein raise new issues requiring further consideration and/or search, but instead only correct a minor typographical error (claim 19) and further clarify features previously set forth, for example, by incorporating features previously set forth in claim 8 into independent claim 1.

## **CLAIM OBJECTIONS**

The Examiner objects to claim 19 because of a minor grammatical error. Applicants have amended claim 19 taking into account the Examiner's comments. Withdraw of this objection is requested.

## **PRIOR ART REJECTIONS**

### **REJECTION UNDER 35 U.S.C. § 103**

The Examiner rejects claims 1-2, 6-8, 11, 14 and 17-19 under 35 U.S.C. § 103 (a) as allegedly being unpatentable over U.S. Patent Publication 2002/0180883 ("Tomizawa") and U.S. Patent 5,347,294 ("Usui"). Applicants have canceled claim 8

without prejudice or disclaimer. In traversal, Applicants address the Examiner's rejection with regard to amended claim 1.

**I. CLAIM 1 IS PATENTABLE OVER TOMIZAWA AND USUI BECAUSE CLAIM 1 IS NOT PRIMA FACIE OBVIOUS OVER THE TEACHINGS OF THESE REFERENCES.**

A *prima facie* case rendering claim 1 obvious over the Examiner's combination of Tomizawa and Usui cannot be established *unless* each of three requirements are met.<sup>1</sup> First, there must be some suggestion or motivation to combine these reference teachings.<sup>2</sup> Such a suggestion or motivation may be found either in the references themselves or in the knowledge generally available to one of ordinary skill,<sup>3</sup> but *must* be found *in the prior art*.<sup>4</sup> Second, there must be a reasonable expectation of success, and third the combination of references must teach or suggest all features of the claim.

A *prima facie* case rendering claim 1 obvious has not been established at least because the combination of Tomizawa and Usui fails to teach or fairly suggest all features of claim 1, and one of ordinary skill would not have been motivated to combine these references. Because these essential criteria have not been met, a *prima facie* case of obviousness has not been established and the Examiner's rejection of claim 1 should be withdrawn.

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<sup>1</sup> M.P.E.P. § 2143.

<sup>2</sup> Id.

<sup>3</sup> Id.

<sup>4</sup> In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

**A. A PRIMA FACIE CASE OF OBVIOUSNESS HAS NOT BEEN ESTABLISHED BECAUSE THE COMBINATION OF TOMIZAWA AND USUI FAILS TO TEACH OR SUGGEST ALL FEATURES OF CLAIM 1.**

The Examiner correctly recognizes that Tomizawa fails to teach or fairly suggest at least the features previously set forth in claim 8, but now set forth in claim 1.<sup>5</sup> Particularly, the Examiner relies upon FIG. 9 and column 6, lines 6-18 of Usui to allegedly teach, "in said adjusting step, strength of modulation is gradually reduced from a full strength to zero strength according to a difference between the video signals of the current field and the video signals of the earlier of the previous two fields, if the difference falls within a predetermined range," as previously set forth in claim 8, and now set forth in claim 1.<sup>6</sup> Applicants disagree.

Contrary to the Examiner's assertion, FIG. 9 of Usui merely shows a structure of a read only memory (ROM) 100 in which converted values (allegedly corresponding to the "strength of modulation,") of a gray scale signal are stored. More particularly, according to Usui, values (0 to 31) of a 5-bit gray scale signal in the previous frame of the video signal are assigned to the vertical addresses, and values (0 to 31) of a 5-bit gray scale signal in the current frame of a video signal are assigned to horizontal addresses.<sup>7</sup> *The optimal data converted values are computed in advance through simulation, and stored in ROM 100.*<sup>8</sup>

Further, in an effort to increase response speed, gray scale data subsequent to the gray scale actually displayed is enhanced by providing the maximum value of a gray scale signal when the value of the current gray scale signal is larger than the previous

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<sup>5</sup> Final Office Action, p. 7 (January 23, 2007).

<sup>6</sup> Id.

<sup>7</sup> Usui, column 10, lines 49-65.

<sup>8</sup> Id.

value, while providing the minimum value of a gray scale when the value of the current gray scale is smaller than the previous one.<sup>9</sup> As noted above, however, these optimal values are generated through simulation and stored in a ROM table in advance.<sup>10</sup> Usui further points out that a plurality of ROM tables are provided in association with different temperatures because the optimal values vary with temperature.<sup>11</sup>

Usui does not, however, teach or fairly suggest "in said adjusting step," gradually reducing the converted values (allegedly corresponding to the "strength of modulation" of claim 1), "*from a full strength to zero strength according to a difference between the video signals of the current field and the video signals of the earlier of the previous two fields, if the difference falls within a predetermined range,*" as required by claim 1.

Moreover, even assuming *arguendo* the pulse width modulation of Usui was equivalent to the "strength of modulation," adjustment in claim 1 (which Applicants do not admit), Usui fails to disclose a connection between the pulse width modulation in the signal drivers 23 and 24 in column 4 and the comparison discussed in column 11 of Usui. Absent any connection between these two functions, the pulse width modulation cannot be said to be "based on a comparison between video signals of the current field and video signals of previous two fields," as required by claim 1.

For at least the forgoing reason, claim 1 is patentable over the Examiner's combination of Tomizawa and Usui. Dependent claims 2, 6, 7 are patentable over Tomizawa and Usui at least by virtue of their dependency from claim 1.

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<sup>9</sup> Usui, column 6, lines 6-18.

<sup>10</sup> Id.

<sup>11</sup> Id.

**B. A PRIMA FACIE CASE OF OBVIOUSNESS HAS NOT BEEN ESTABLISHED BECAUSE THE COMBINATION OF TOMIZAWA AND USUI FAIL TO TEACH OR SUGGEST ALL FEATURES OF CLAIMS 11, 17 OR 18.**

With regard to claim 11, for example, the Examiner rejects Applicants argument that Usui fails to teach or fairly suggest at least an "adjusting means for adjusting strength of modulation based on a result of comparison between video signals of the current field and video signals of an earlier of previous two fields," as set forth in claim 11. Particularly, the Examiner apparently believes the signal applied to the display in Usui is altered based on previous data, and therefore, is different from the original input gray scale data. Applicants fail to see the point of the Examiner's argument, however, because claim 11 requires adjusting the "strength of modulation," based on "a comparison between video signals of the current field and video signals of an earlier of previous two fields." Thus, in the device of claim 11, it is not merely the signals, but the "strength of modulation," that is adjusted. This is not taught or fairly suggested by Usui.

Moreover, the Examiner further contends the pulse width modulation in Usui is equivalent to "adjusting the strength of modulation," in claim 11. Applicants disagree.

According to column 4 of Usui, signal drivers of 23 and 24 of LCD sections 16, 17 and 18 generate gray scale signals to be applied to the liquid crystal display panel 20 by pulse width modulating input gray scale data. However, this pulse width modulation is not equivalent to "adjusting strength of modulation," as required by claim 11. By contrast, the pulse width modulation in Usui merely generates signals in one of 16 pulse widths corresponding to the input gray scale data. The pulse width modulation in Usui *does not* inherently include any adjusting of modulation strength.

The Examiner also relies on the disclosure in column 4 together with the disclosure in column 10 of Usui to teach a connection between the pulse width

modulation and a comparison between video signals. Based on this alleged connection, the Examiner concludes that Usui discloses adjusting strength of modulation "based on a comparison between video signals of the current field and video signals of an earlier of previous two fields," as required by claim 11. Applicants disagree with this reasoning.

Even assuming *arguendo*, the pulse width modulation of Usui could constitute the "adjusting strength of modulation," in claim 11, Usui fails to disclose a connection between the pulse width modulation in the signal drivers 23 and 24 in column 4 and the comparison discussed in column 11 of Usui. Absent any connection between these two functions, the pulse width modulation cannot be said to be "based on a comparison between video signals of the current field and video signals of previous two fields," as required by claim 11.

For at least the foregoing reasons, independent claim 11 is patentable over Tomizawa and Usui. Independent claims 1, 17 and 18 are also patentable over Tomizawa and Usui for at least reasons somewhat similar to those set forth above with regard to claim 11. Dependant claims 2, 6, 7, 14 and 19 are patentable over Tomizawa and Usui at least by a virtue of their dependency from independent claims 11, 17, and 18.

**C. A PRIMA FACIE CASE OF OBVIOUSNESS HAS NOT BEEN ESTABLISHED BECAUSE ONE OF ORDINARY SKILL WOULD NOT HAVE BEEN MOTIVATED TO COMBINE TOMIZAWA AND USUI TO ARRIVE AT THE METHOD OF CLAIM 1.**

Furthermore, Applicants continue to respectfully submit one skilled in the art would not have combined Tomizawa and Usui as asserted by the Examiner. The Examiner states:

...it is not proposed that Usui's time division gray scale method be used in place of Tomizawa's different amplitudes of voltages for each gray scale. Rather, it [is] proposed to augment the invention of Tomizawa by additionally adjusting the modulation of the signals applied to the display.<sup>12</sup>

The time division gray scale method sector write data of which the Examiner speaks in his motivation allegedly corresponds to the feature of claim 1 admittedly absent from Tomizawa. Apparently, the Examiner believes one of ordinary skill in the art would not replace the gradation voltage driving in Tomizawa with the time division method of Usui, but would have been motivated to improve the system of Tomizawa by incorporating the time division gray scale method of Usui in addition to the gradation voltage driving in Tomizawa. Applicants disagree.

As previously discussed,<sup>13</sup> Tomizawa teaches gradations of voltages for driving, whereas Usui utilizes time division for driving. Thus, each of Tomizawa and Usui provide the same function or result ("driving") in a different manner. Assuming *arguendo* the Examiner's rebuttal is plausible (which Applicants do not admit), why one of ordinary skill in the art would incorporate such a repetitive and unnecessary operation (i.e., time division driving), when Tomizawa already achieves the same effect, albeit in a different way? In other words, if not replacing the driving of Tomizawa with the driving of Usui, why would one of ordinary skill in the relevant art have been motivated incorporate the teachings of Usui when Tomizawa already achieves the desired effect? *They would not*. Accordingly, even taking the Examiner's comments regarding the combination of Tomizawa and Usui to be true, one of ordinary skill would *not* have been motivated to combine Tomizawa and Usui to arrive at the method of claim 1.

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<sup>12</sup> Final Office Action at 3.

<sup>13</sup> See, e.g., Amendment (October 30, 2006).

Given the above, it appears the Examiner has fallen victim to the hindsight syndrome, and combined the references for the sole purpose for reconstructing the Applicant's claimed invention in hindsight. As is well known, this is an improper basis for an obviousness rejection.

Applicants understand that under In re McLaughlin, any reconstruction of the claimed invention may be acceptable so long as the reconstruction takes into account only knowledge within the level of ordinary skill in the art at the time the invention was made, and does not include knowledge gleaned from the Applicant's disclosure.<sup>14</sup> However, as the Examiner is well aware, the rationale of the Mclaughlin Court may not be used *unless* the facts in that case are sufficiently similar to the facts in the present case.<sup>15</sup> If the Examiner believes the Mclaughlin holding to be applicable here,

**Applicants request the Examiner provide reasoning as to how the facts of Mclaughlin and present case are similar.**

Moreover, given the fact that Tomizawa already provides a driving method, the only logical conclusion is that one could only reconstruct the method of claim 1 by improperly gleaning knowledge from Applicant's disclosure using Applicant's disclosure as a blueprint. Otherwise, why would one of ordinary skill be motivated to include unnecessarily redundant methods for driving?

The McLaughlin Court also clarified the test for obviousness as "not what the individual references themselves suggest, but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art."<sup>16</sup> As discussed above, however, the disclosures of Tomizawa and Usui, taken in

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<sup>14</sup> 443 F.2d 1392 (CCPA 1971).

<sup>15</sup> M.P.E.P. § 2144.

<sup>16</sup> Id.



combination, *do not* suggest the method of claim 1 at least because Tomizawa already provides a voltage gradation method for driving.

For the reasons set forth above, claim 1 is not rendered obvious to one skilled in the art by Tomizawa in view of Usui. Claims 2, 6-8, 11, 14 and 17-19 are also not rendered obvious for at least reasons somewhat similar.

#### **FURTHER PRIOR ART REJECTIONS UNDER 35 U.S.C. § 103(a)**

Under 35 U.S.C. § 103(a), the Examiner further rejects claims 3, 4 and 5 over Tomizawa, Usui and U.S. Patent No. 6,295,091 ("Huang"); claims 9 and 10 over Tomizawa, Usui and U.S. Patent No. 6,909,472 ("Gadeyne"); claims 12 and 13 over Tomizawa, Usui and U.S. Patent No. 5,488,389 ("Nakanishi"); and claims 15 and 16 over Tomizawa, Usui, Nakanishi and U.S. Patent No. 4,937,667 ("Choquet"). Each of these rejections is respectfully traversed in that none of the above references teaches makes up for the deficiencies of Tomizawa and Usui with regard to claims 1, 11, 17 or 18. For at least this reason, the rejection of claims 3-5, 9-10, 12-13 and 15-16 should be withdrawn.

#### **CONCLUSION**

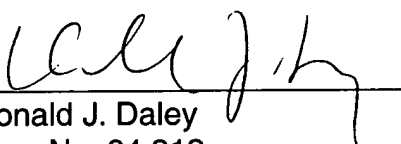
In view of above remarks, reconsideration of the outstanding rejection and allowance of the pending claims is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Andrew M. Waxman, Reg. No. 56,007, at the number of the undersigned listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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